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ABSTRACT

A sociological study investigating the relationship between perception of crowding and social status was conducted in a rural camping setting. Results indicate that higher social status groups and groups aspiring to higher social status are more likely to perceive crowding than are lower status groups, but more research is suggested prior to the establishment of final conclusions. (LH)

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SOCIAL CARRYING CAPACITY AS STATUS GROUP CONVENTION

Previous research on wildland recreational social carrying capacity has tended to emphasize the effect of density on perceived carrying capacity as mediated by various psychological or social-psychological factors such as perceived number of parties seen and prior expectations (Schreyer and Roggenbuck, 1978; Heberlein, 1977; Shelby, 1975; Randal, 1977). Although there has been a great deal of research on the relationship between social stratification and recreation participation, demand, and preferences, rarely has this analysis been extended to the understanding of variations in people's perceptions of carrying capacity. Lucas's early studies in the boundary waters canoe area showed that paddle canoers had more restrictive social carrying capacity perceptions than other groups and that paddle canoer's came proportionally from higher education strata than other groups, but the relationship between social status and social carrying capacity perceptions was not measured directly (Lucas, 1964).

Drawing primarily on Weber's theory of the relationship between status groups, style of life, and status group conventions, it is hypothesized in this paper that perceptions of crowding and social carrying capacity represent in part, an expression of status group conventions. Tolerance of the closeness of others is socially defined. The socialization of expectations and the enforcement of such norms through peer pressure with respect to such "social distances" is preeminently the domain of status groups. I am suggesting that any empirical relationship between social economic status indicators and perceived social carrying capacity is more than intrinsic, i.e., is more than simply that high education persons are more aesthetically

sensitive. Rather, I am suggesting that the whole range of attitudes including aesthetic sensibilities, tolerance of others, the expressed desire for privacy, etc. are all social conventions conditioned in part by status group processes. In Weber's words:

> "Status honor is normally expressed by the fact that above all else, a specific style of life can be expected from all those who wish to belong to the circle. Linked with this expectation are restrictions on social intercourse. The decisive role of 'style of life' in status 'honor' means that status groups are the specific bearers of all 'conventions'. In whatever way it may be manifest all 'stylization' of life originates in status groups or is at least conserved by them." (Weber, 1966:24).

In egalitarian, achievement oriented societies such as ours, there is a particular tension between egalitarian pressures not to be overtly concerned with status, and counter pressures to be pre-occupied with status. As De Tocqueville observed, egalitarian societies like America breed intense status competition over minute differences (De Tocqueville, 1945). Thus, to the extent that the expression of status group conventions may represent a direct expression of status concerns, it is usually expressed indirectly through detailed rhetorical attention to styles of life as a sublimation of status insecurities. Status as an <u>expressed</u> motive in back country recreation is not a major motivation (Schreyer and Roggenbuck, 1978). At least is is not admitted to on surveys or in social conversation, for to do so is "bad form" that ironically diminishes the status value of one's life style conventions. However, it is not even necessary

to posit "status striving" per se as a major hidden driving force. Rather, persons may be simply socialized into a style of life within one's status group that trains certain conventions of dress, speech, leisure preferences, and I suspect, norms of acceptable densities in different social settings. These conventions are both internalized in the individual as deeply held beliefs and markers of identity, and enforced by subtle or overt sanctions of other members of status groups to which one belongs or aspires to.

Indirect evidence for status group interpretations can be found in research that indicates that the kinds and behavior of people is more important than strictly the number of people one encounters in the back country (Lee, 1975). Lee's studies in Yosemite National Park also indicate that behavior diverges markedly from expressions of crowding in social surveys. Apparently people will say they feel crowded and then go and camp close to other parties when they could have camped farther away (Lee, 1977). This suggests that saying one feels crowded may be an important rhetorical requirement of certain status group lifestyles but that behavior is conditioned more by the human propensity for togetherness. Like cumbersome manners, and uncomfortable corsets, we conform to these status group conventions at least rhetorically even against our natural grain. We proclaim our search for solitude but huddle together in the unfamiliar wilderness.

Status group cultures are amorphous and not clearly demarcated in non-ascriptive societies. Thus they are difficult to measure empirically though they are conceptually useful constructs (Collins, 1971). Status group placement can be roughly estimated through the standard socio-economic variables. Education is especially important as a status group indicator

due to the importance of education in American society as a socializer into status group cultures (Collins, 1971).

Using socio-economic variables and especially education as surrogates for indicating status group placement, four hypotheses were developed:

Hypothesis 1:

Status group placement will be related to perception of social carrying capacity.

Hypothesis 2:

There will be an interaction between perceived density and status group placement. Those with high education who also see the greatest number of parties will feel the most crowded.

Hypothesis 3:

Status inconsistent individuals will be more sensitive to crowding. Because of their greater status insecurity they were expected to feel the need to demonstrate more rhetorical commitment to anti-crowding status group conventions.

Hypothesis 4:

The relationship between perceived crowding and desire to reduce established carrying capacities will be greater amongst high status group persons. High status group individuals were expected to attribute that high status individuals who felt crowded would be most likely to want to reduce the numbers of people in the back country.

The Study Area And Research Methods

These hypotheses were explored in a study of back country canoe campers and back-packers at the Sylvania Recreation Area in the Upper Peninsula of Michigan. The Sylvania Area is managed as a multiple use back country recreation area by the U.S. Forest Service. It is currently proposed for wilderness designation in the RARE II proposals by the Forest Service. This 20,000 acre is a unique lake country area with very clear "oligotrophic" northern lakes. Use is limited in the back country to 84 designated sites. The sites are developed with compost latrines to insure minimum impact on water quality. With these technological improvements, social carrying capacity is more of a restricting factor than ecological carrying capacity in the area.

Parties must register for specific sites at a controlled access entry station. Because of this, we had hoped initially to get a strict random rample drawn from the registration cards. However, it was important to interview people after their trip rather than before. Since campers were not required to check out, and often left at odd hours, it was difficult to contact sampled parties. Therefore we switched early in the summer to a random time sample of the two take out points on Clark Lake and Crooked Lake. During each random time period, a 100% sample was taken of all parties leaving. This produced a sample of 321 parties. Of the parties contacted there were no refusals. Heads of parties were interviewed using a structured questionnaire format.

Operationalization of Variables:

Status group placement was measured with standard education and income questions. Status inconsistency was measured by differences in status on education and income measures. Education and income were divided into high and low categories. The cutting point was determined so as to produce enough persons in each cell for the analysis. Persons with high education and low income and persons with high income and low education were categorized as "status discrepent". Perceived density was measured by the question "Could you estimate how many other groups you saw in the back country on this trip?" and "What was the greatest number of groups you saw in any one day?" Perceived crowding was measured by the question, "Would you say the back country was: very over-crowded, somewhat over-crowded, not crowded, or don't know?" Desire to reduce or increase established carrying capacities was measured by the question, "There are currently 84 back country campsites at Sylvania. Should the number of campsites be: increased, kept about the same, decreased, or don't know?"

Results

Hypothesis I stated that status group placement would be related to perception of overcrowding. Table 1 reports the results for the relationship between education of the head of party and perception of overcrowding. In the bivariate form the hypothesis was not supported (Gamma = .03; Tau = .01). This is not surprising since numbers of parties seen was not accounted for, i.e. low status persons seeing

a large number of parties might feel just as crowded as high status persons who saw few parties.

Hypothesis 2 posits an interaction between number of parties seen and status group placement. In table 2, the "number of parties seen" variable was categorized into low, medium and high. Education is collapsed into high and low to preserve enough cases in each cell for the multivariate analysis. The crowding variable was collapsed into "crowded" (combination of "very overcrowded" and "somewhat over crowded), and "not crowded".

In percentage terms, persons who had high education and saw a high number of other parties had the greatest perception of crowding, 41.3% (See table 2). A X^2 test of the impact of the composit interaction variable composed of education and "parties seen" is statistically significant (X^2 = 26.9, 5 d.f., significant at the .01 level). However, most of this is due to the effect of the "parties seen" variable. The bivariate X^2 for the effect of "parties seen" is 25.0 (2 d.f., significant at the .01 level.) The ordinal correlation relationship between education and crowding within levels of parties seen remains low. (See ordinal correlation coefficients reported in Table 2). Nevertheless, the percentage differences do indicate a slight interaction between education and parties seen in the hypothesized direction.

The third hypothesis posited that status inconsistency might also play a role. Status inconsistent persons might feel more pressured to conform to high status group conventions about crowding. Alternatively, they might also form a distinct status group with their own emergent conventions with respect to crowding. This might be especially salient

among young, high-education, low-income persons. Table 3 presents summary results from the interaction between parties seen, education, income, and perceived crowding. Because of the need to maintain cell sample sizes, the "parties seen" variable in this analysis was further collapsed into high and low.

Again, in percentage terms, there is a relationship in the hypothesized direction. High education, low income status discrepent strata who saw a large number of parties had the highest percent of persons who felt crowded (44%). However, again in statistical terms, the total variance explained by the composite X^2 does not increase (X^2=25.49, 7 d.f., significant at the .01 level). In correlational terms, however, there is an interaction effect. Gamma for the relationship between education and perception of crowding is high for the "low-income, high parties seen" sub-sample, (Gamma=-.44). There is a strong relationship in the opposite direction for the "low-income, parties seen" sub-sample (Gamma=.68). Relationships are low for the other two sub-sample combinations, (Gamma=.1; Gamma=.15). These relationships were not statistically significant due to low sample sizes in the four sub-samples.

The fourth hypothesis was that the relationship between perceived crowding and desire to change established carrying capacities would interact with status group placement. In particular, the relationship between perceived crowding and desire to reduce campsite numbers would be stronger amongst high education status groups. The results of this analysis are shown in Table 4. The hypothesized relationship is supported. In percentage terms, high education persons who perceive crowding have the greatest percent wanting to reduce campsite numbers

(26.8%). In correlational terms, the relationship between perceived crowding and the desire to reduce the number of campsites is strongest amongst the high education group; (Gamma = -.64, significant at the .000 level; Tau=-.29, significant at the .000 level, compared to Gamma = -.13, Tau=-.05 for the low education group).

Discussion

This research has found a moderate tendency for perceived overcrowding to be greater amongst those with high education who encounter a large number of parties, especially amongst status discrepent high education strata. The relationship between perceived crowding and desire to limit campsite numbers is also strongest among high education status groups. These findings are in the hypothesized direction but except for the last finding they are statistically weak. In explaining possible reasons for the weakness of these relationships, there are two major competing explanations. It may be that status group forces only weakly influence carrying capacity perception and that our theoretical perspective is simply wrong. On the other hand, it may be that the dynamics we posit are operative and indeed are so strong that members of low status groups who have emulated the high status activity of back county camping have also emulated the rhetorical concerns for crowding, hence weakening the empirical correlations between socio-economic indicators and perception of crowding. In other words, life style status groups may not be totally congruent with status group indicators of education, income, occupation, etc. We cannot tell from these data which of these opposing explanations is more valid. We are currently analyzing other data from the Sylvania study that hopefully will shed some light on this issue by examining the dynamics of these relationships over time.

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Table 1

Relationship Between Education
and Perception of Crowding

	Education	
	Hi	Lo
Very overcrowded	5% (9)*	3% (4)
Somewhat Overcrowded	18% (33)	17% (23)
Not Crowded	77% (138)	80% (107)
	100% (180)	100% (134)

X^2= .89 (not significant)
taub.= .01 (not significant)
Gamma= .03 (not significant)

*number in ( )

Table 2

Interaction Relationship of Parties Seen and Education to Perception of Crowding

		Education	
		High	Low
Number of Parties Seen	High	41.3%* (63)**	33.3% (39)
	Medium	20.3% (64)	14% (43)
	Low	5.9% (51)	15.3% (52)

X^2= 26.9, 5dc, signifcant at the .01 level.
Ordinal correlation coefficients for the relationship between education on perception of crowding within each level of parties seen:

High number of parties seen:	TauB= -.08(NS),	Gamma= -.17 (NS)
Medium number of parties seen:	TauB= -.08(NS),	Gamma= -.24 (NS)
Low number of parties seen:	TauB= .15 (NS),	Gamma= .49 (NS)

*Percents are present of persons in each cell who feel crowded. For instance, of those who had high education and saw a high number of parties 41.3 percent felt crowded.

**Numbers in ( ) or total persons in each cell upon which percents are based.

Table 3

Interaction Relationship Between Education,

Income, Parties Seen and Perception of Crowding

	Parties Seen			
	High		Low	
	Income		Income	
	High	Low	High	Low
Education:				
High	24%*	44%	16.7%	3%
	(50)**	(50)	(42)	(33)
Low	30%	23%	13.8%	14%
	(30)	(30)	(29)	(42)

Composite X^2 = 25.5, 7d.f, significant at the .01 level

Ordinal correlations between education and perception of crowding within subsamples:

High parties seen/High Income: TauB = .07 (NS), Gamma = .15
High parties seen/Low Income: TauB = -.21 (NS, Gamma = -.44 (NS)
Low parties seen/High Income: TauB = -.04 (NS), Gamma = -.11 (NS)
Low parties seen/Low Income: TauB = .19 (NS), Gamma = .68 (NS)

*Percents are percent of person in each cell who feel crowded. For instance 24% of those with high education and high income who saw a high number of parties felt crowded.

**Numbers in ( ) are total persons in each cell upon which percents are based.

Table 4

Perception of Crowding By Preference for

Number of Campsites Controlled for Education

Low Education

Number of Campsites Preferred

Perception of Crowding	Don't Know	Increase	Keep Same	Decrease	Total
Crowded	4.5% (1)	11.5% (3)	73% (14)	11.5% (3)	100% (26)
Not Crowded	9.6% (5)	11.1% (12)	81.5% (88)	2.8% (3)	100% (108)

High Education

Number of Campsites Preferred

Perception of Crowding	Don't Know	Increase	Keep Same	Decrease	Total
Crowded	3% (1)	4.8% (2)	68.3% (28)	26.8% (11)	100% (41)
Not Crowded	1.4% (2)	15.2% (21)	80.4% (111)	2.9% (4)	100% (138)

Low Education Sub Sample: TauB = -.05 (NS)
Gamma = -.13

High Education Sub Sample: TauB = -.29 significant .000
Gamma = -.64 significant .000